SECTION 8.0

AIRPORT ALTERNATIVES ANALYSIS

8.1 INTRODUCTION

This section describes the investigation, planning, and technical analysis of viable airport development alternatives at Double Eagle II Airport. As identified in Section 6.0, Airside Demand Capacity/Facility Requirements, the present runway system will be adequate to meet demand until between 2005 and 2010, depending upon which forecast scenario is most accurate. The alternatives analysis conducted for this Airport Master Plan identifies viable airport and economic development actions available to the City of Albuquerque that will serve to provide needed airfield capacity, enhance airfield infrastructure, and create a strategic airport development platform upon which the City can attain its airport development goals.

Six crosswind alternatives were identified along with proposed extensions to both existing runways and a future parallel runway. Each viable alternative identified and assessed provided varying degrees of operational freedom and environmental compatibility. Four facility alternatives were identified and assessed. In addition, three access modification options to the existing on-airport access road were evaluated.

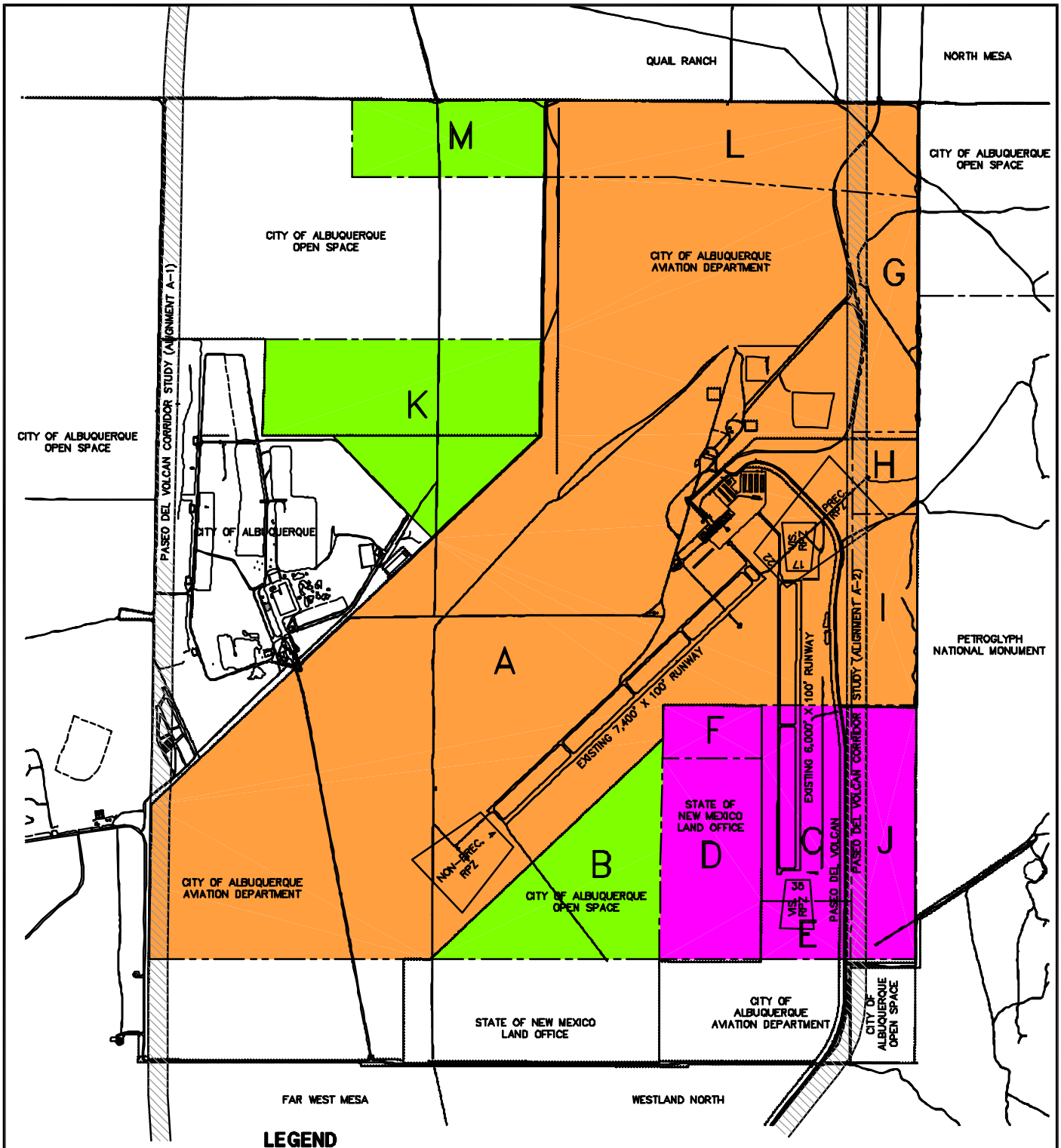
8.2 EXISTING CONDITIONS

8.2.1 Airfield

The airfield system at Double Eagle II Airport includes two runways: Runway 4/22 (7,400 feet x 100 feet) oriented northeast/southwest and Runway 17/35 (6,000 feet x 100 feet) oriented north/south. Each runway is served by a full-length parallel taxiway located 400+/- feet (Taxiway A is 406 feet center-to-center) centerline-to-centerline distance from runway centerlines. Taxiway A is northwest of Runway 4/22 and includes six entrance/exit taxiways. Taxiway B is west of Runway 17/35 and includes three entrance/exit taxiways. Taxiway A is 40 feet wide and Taxiway B is 35 feet wide.

8.2.2 Property Ownership/Management

Double Eagle II Airport is currently comprised of 4,700 acres as shown in Figure 8.1. The City of Albuquerque owns 3,800 acres of this land. The remaining 900 acres are State Trust Lands, of which, approximately 117 acres are leased to the City for Runway 17/35 on a 99-year lease that began in 1983.



LEGEND

- CITY OF ALBUQUERQUE AVIATION DEPARTMENT
- PROPERTY OWNERSHIP BY OTHERS
- CITY OF ALBUQUERQUE AVIATION DEPARTMENT
- CITY OF ALBUQUERQUE OPEN SPACE
- STATE OF NEW MEXICO LAND OFFICE
- QUAIL RANCH
- LOCATION STUDY CORRIDOR (PASEO DEL VOLCAN EIS, MARCH 2000)

NOTE: OWNERSHIP/MANAGEMENT GROUPS AS OF MARCH, 2001.

N

3000 0 3000

GRAPHIC SCALE IN FEET
SCALE: 1" = 3000'

J:\DOUBLE EAGLE II\DRAWINGS\FIG 8.1.DWG 03/08/02 15:40

Double Eagle II Airport Master Plan

URS

EXISTING AIRPORT PROPERTY BY OWNERSHIP/MANAGEMENT GROUPS

FIGURE: 8.1

State Trust Lands cannot be acquired but can be exchanged for land of equal value and size. The State Land Office is responsible for administering 9 million acres of surface and 13 million acres of subsurface for the beneficiaries of the trust. Each acre of land is designated to a specific beneficiary, with public schools receiving more than 90 percent of this acreage. State trust land is located in 32 of New Mexico's 33 counties. The goals of the trust are to optimize revenues while protecting the health of the land for future generations.

8.2.3 Property Exchange

Presently, the City of Albuquerque Aviation Department is involved in a complex property exchange between multiple owners of land on-airport and surrounding Double Eagle II Airport. Organizations involved include the City of Albuquerque Open Space Division and Aviation Department, Quail Ranch private developers, State Land Office, and Eclipse Aviation.

The City of Albuquerque Administration, Aviation Department and Open Space Division, the State Land Office, and the Quail Ranch developers are willing to make several land exchanges to accomplish the following:

- Open Space would like to acquire additional buffer area along the west boundary of the Petroglyph National Monument to protect this resource; the Aviation Department does not intend to develop east of the existing access road and is willing to make this exchange to benefit the Monument; the Aviation Department would also like to acquire more property on the west side of the airport to accommodate future development away from the Monument.

- The City of Albuquerque would like to acquire the 200-acre parcel on the west side of Runway 17/35 from the State Land Office to meet their obligation to provide a 150-acre site to Eclipse Aviation, a new aircraft manufacturing company that has located in Albuquerque; Eclipse Aviation is a major factor in economic development on the west side of Albuquerque and at Double Eagle II Airport.

- The State Land Office is willing to make the exchange to provide the Aviation Department with ownership of the property on and around Runway 17/35 and to aid the City in the successful development of Eclipse Aviation; the State Land Office also recognizes the need and potential for development of non-aviation related support facilities for Eclipse near their work site to promote further economic development in the area.

- The Quail Ranch developers are willing to make the exchange and donate a portion of their property to aid the City and the State in the successful development of Eclipse Aviation; the Quail Ranch developers also recognize the need and potential for development of non-aviation related support facilities for Eclipse near their work site to promote further economic development in the area.

The existing airport property by ownership/management groups is shown on Figure 8.1. The final property exchange is shown in Figure 8.2.

8.3 AIRFIELD ALTERNATIVES CONSIDERED

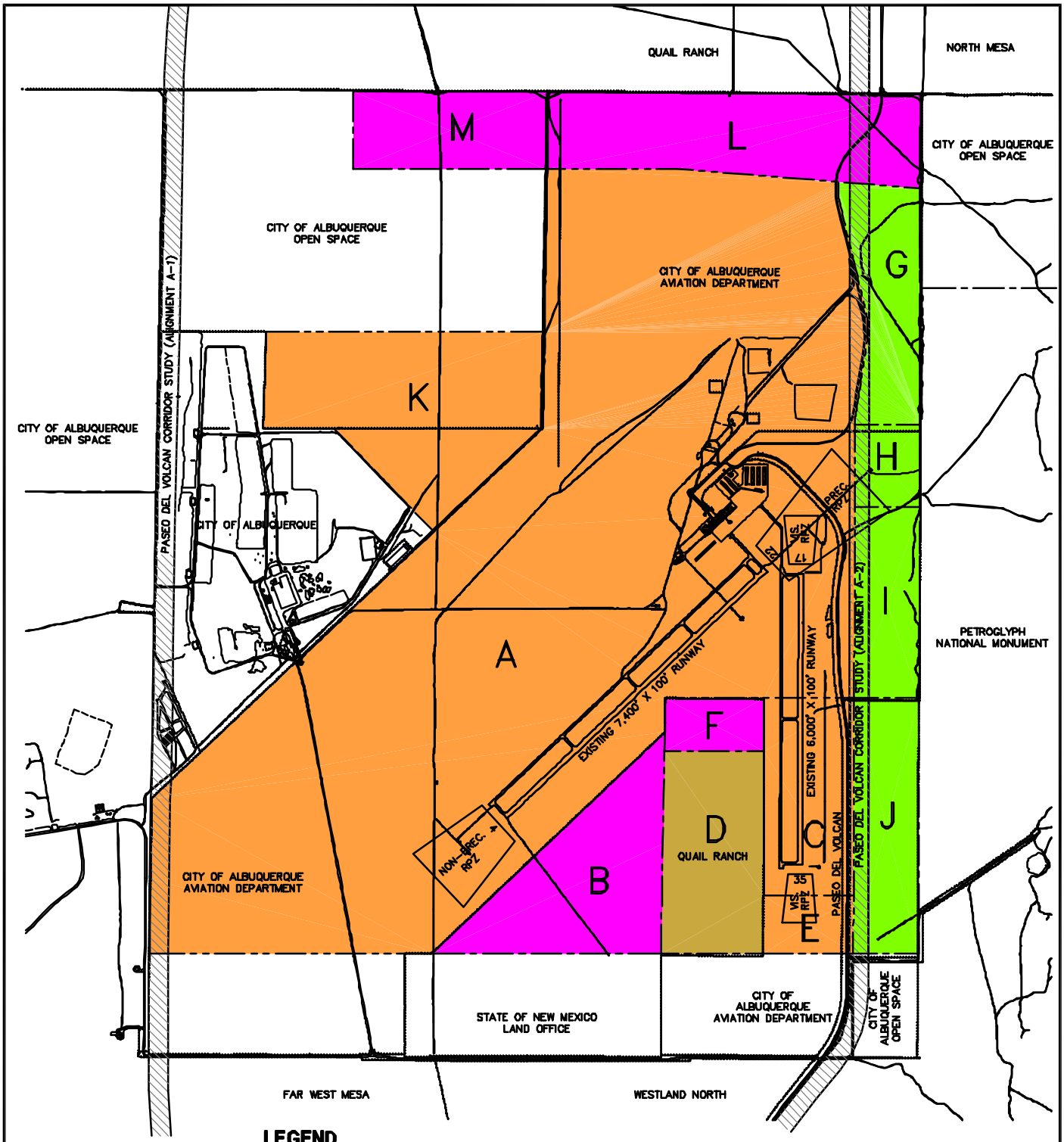
The following analysis of proposed alternatives identifies options to accommodate increased runway length, additional airfield capacity, and increased wind coverage throughout the 20-year planning period. Overall benefits and disadvantages of each airfield alternative are identified. In addition, previous planning and engineering studies, designs, etc. were considered and incorporated to the fullest extent possible. Descriptions of the preliminary airfield alternatives are discussed in the following sections. Finally, a short list of airfield alternatives that combines airfield alternatives is presented.

8.3.1 Runway Extension Options

To provide additional runway length, extensions to all four runway ends were considered in the airfield alternatives analysis. Extensions to the approach of Runways 22 and 17 were considered but eliminated based on facility constraints in addition to input from airport management and airport users. Extensions to the approach of Runways 4 and 35 were chosen and evaluated in the short list of airfield alternatives. These extensions maximize Double Eagle II Airport's existing facilities and provide minimal impacts to Petroglyph National Monument and existing communities located north of the airport. Runway extension options that were considered in the preliminary airfield alternatives analysis are presented in Figure 8.3.

8.3.2 Airfield Capacity Enhancement Options

To provide additional capacity, a parallel runway to Runway 4/22 was considered. Runway 4L/22R was evaluated using various centerline-to-centerline separation standards presented in the Federal Aviation Administration (FAA) Advisory Circular (AC) 150/5200-13 Change 4, *Airport Design*. Separation distances evaluated include 4,300 feet, 3,500 feet, 2,500 feet, and 800 feet. A separation of 4,300 feet would provide for dual simultaneous precision instrument approaches. A separation distance of 3,500 feet would provide simultaneous nonradar departures while a separation of 2,500 feet would allow simultaneous radar departures. The 4,300-separation distance standard would enable the most options for unconstrained future growth. In addition, a larger area would be available in the infield for aviation-related development as well as allowing the potential for simultaneous dual instrument approaches. Airfield capacity options considered in the preliminary airfield alternatives analysis are presented in Figure 8.4.



LEGEND

- CITY OF ALBUQUERQUE AVIATION DEPARTMENT
- PROPERTY OWNERSHIP BY OTHERS
- CITY OF ALBUQUERQUE AVIATION DEPARTMENT
- CITY OF ALBUQUERQUE OPEN SPACE
- STATE OF NEW MEXICO LAND OFFICE
- QUAIL RANCH
- LOCATION STUDY CORRIDOR (PASEO DEL VOLCAN EIS, MARCH 2000)

NOTE: PRELIMINARY LAND EXCHANGE AS OF FEBRUARY, 2002.

N

3000 0 3000

GRAPHIC SCALE IN FEET
SCALE: 1" = 3000'

Double Eagle II Airport Master Plan

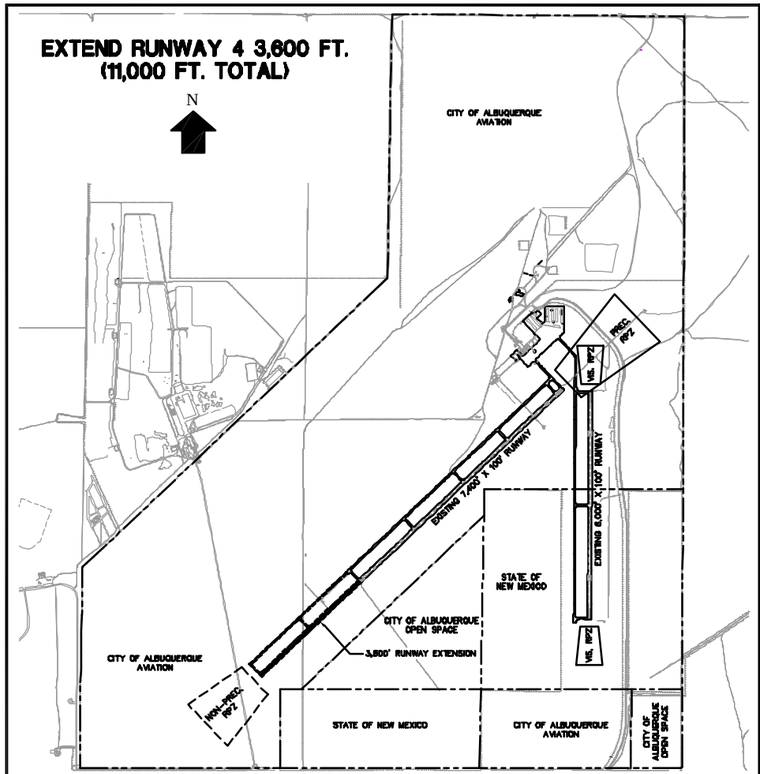
URS

PRELIMINARY LAND EXCHANGE DISCUSSION

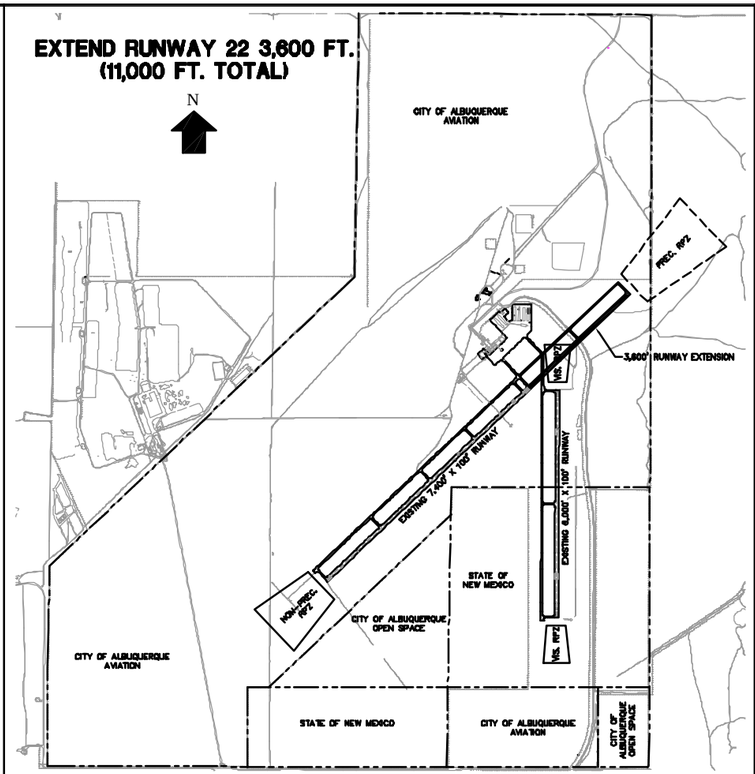
FIGURE: 8.2

J:\DOUBLE EAGLE II\DRAWINGS\FIG 8.2.DWG 03/08/02 15:45

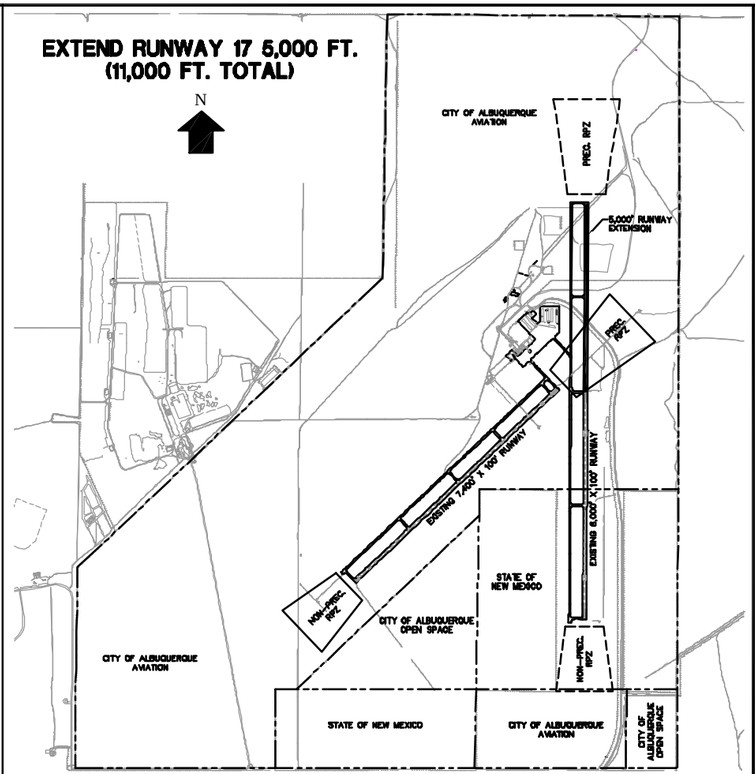
EXTEND RUNWAY 4 3,600 FT. (11,000 FT. TOTAL)



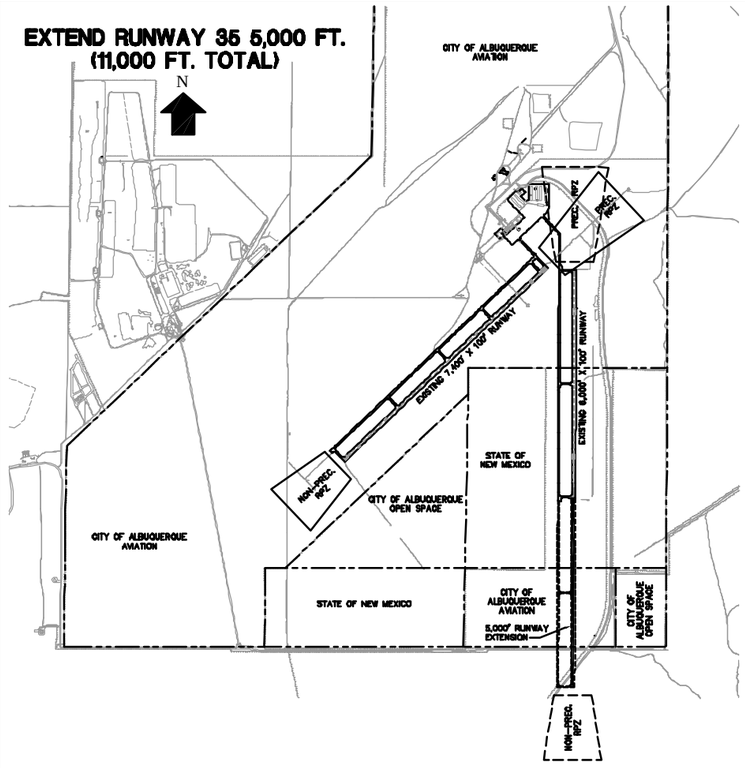
EXTEND RUNWAY 22 3,600 FT. (11,000 FT. TOTAL)



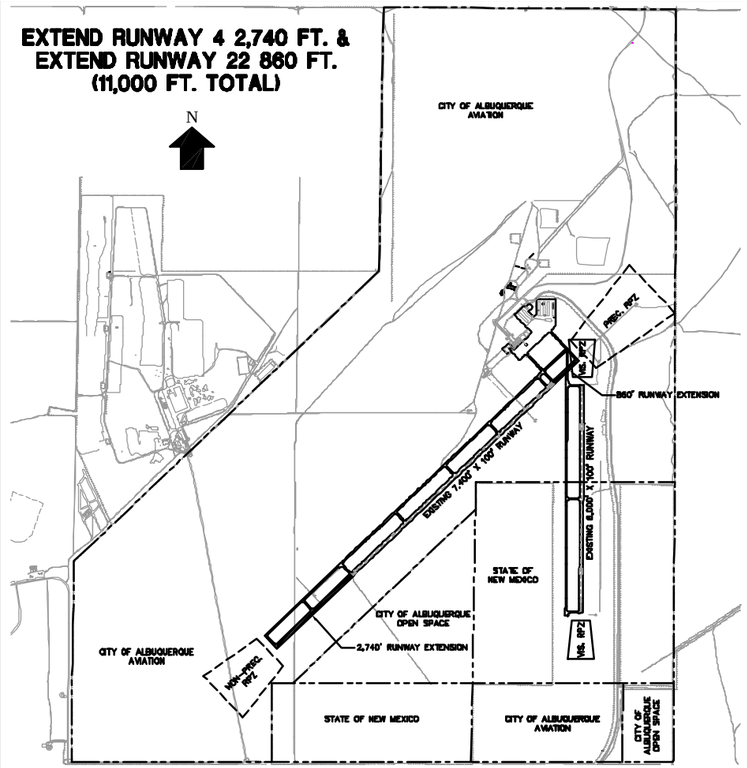
EXTEND RUNWAY 17 5,000 FT. (11,000 FT. TOTAL)



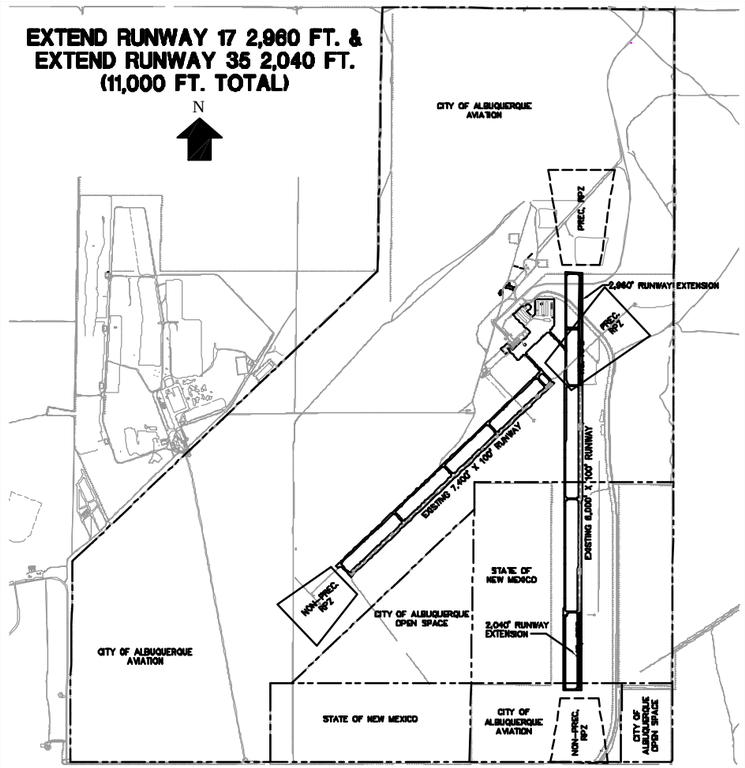
EXTEND RUNWAY 35 5,000 FT. (11,000 FT. TOTAL)



EXTEND RUNWAY 4 2,740 FT. & EXTEND RUNWAY 22 860 FT. (11,000 FT. TOTAL)



EXTEND RUNWAY 17 2,960 FT. & EXTEND RUNWAY 35 2,040 FT. (11,000 FT. TOTAL)



GRAPHIC SCALE IN FEET
4000 0 4000
SCALE: 1" = 4000'

Double Eagle II Airport Master Plan

URS

RUNWAY LENGTH ALTERNATIVES

FIGURE: 8.3

J:\DOUBLE EAGLE II\DRAWINGS\FIG 8.3.DWG 02/22/02 09:57

Double Eagle II
Airport Master Plan

URS

RUNWAY CAPACITY ALTERNATIVES

FIGURE:
8.4

J:\DOUBLE EAGLE II\DRAWINGS\FIG 8.4.DWG 03/08/02 13:50

8.3.3 Crosswind Options

Based on the wind analysis presented in Section 6.0, Airside Demand Capacity/Facility Requirements, a runway designation of 10/28 was determined to provide the highest wind coverage on an all-weather basis from January to June. Therefore, the location of this secondary crosswind runway is recommended with a 10/28 orientation to provide annual crosswind coverage for smaller aircraft. The wind analysis presented in Section 6.0, Airside Demand Capacity/Facility Requirements, analyzed one year of wind data. A sensitivity analysis of this data indicated that the orientation of the crosswind runway has a 20-degree window to provide the recommended wind coverage. Before implementation of a crosswind runway occurs, it is recommended that a more in depth wind analysis be conducted. Crosswind Runway placement options that were considered in the preliminary airfield alternatives analysis are presented in Figure 8.5.

8.4 SHORT LIST OF AIRFIELD ALTERNATIVES

8.4.1 Future Runway Extensions

An extension to Runway 4 is recommended within the first five years of the 20-year planning period to accommodate aircraft operating fleet mix projections. As presented in Figure 8.6, the extension would maximize the existing facilities at Double Eagle II Airport while providing minimal impacts to the Petroglyph National Monument and existing communities located north of the airport. An extension to Runway 35, as shown on Figure 8.6, is recommended within the 20-year planning period if forecast levels and fleet mix require the improvement.

8.4.2 Future Parallel Runway

To provide additional airfield capacity, construction of a new Runway 4L/22R is recommended by the end of the 20-year planning period. As presented in Figure 8.7, a separation distance from the existing Runway 4/22 of 4,300 feet would enable unconstrained future growth as well as allow the potential for simultaneous dual instrument approaches. In addition, a larger area would be available in the infield for aviation-related development.

8.4.3 Crosswind Runway Alternatives

To provide additional wind coverage for January through June when the wind coverage of the runways falls below the FAA recommended 95 percent, an additional crosswind runway is recommended. Before implementation of a crosswind runway occurs, it is recommended that a more in depth wind analysis be conducted to determine the best runway orientation while avoiding environmentally sensitive lands. Following are four crosswind locations that were considered in this airfield alternatives analysis.

GRAPHIC SCALE IN FEET

4000 0 4000

SCALE: 1" = 4000'

Double Eagle II Airport Master Plan

URS

RUNWAY WIND COVERAGE ALTERNATIVES

FIGURE: 8.5

J:\DOUBLE EAGLE II\DRAWINGS\FIG 8.5.DWG 03/08/02 13:55

QUAIL RANCH

NORTH MESA

CITY OF ALBUQUERQUE OPEN SPACE

CITY OF ALBUQUERQUE AVIATION DEPARTMENT

CITY OF ALBUQUERQUE OPEN SPACE

CITY OF ALBUQUERQUE OPEN SPACE

PASEO DEL VOLCAN CORRIDOR STUDY (ALIGNMENT A-1)

CITY OF ALBUQUERQUE

PREC. RPZ

35

VIS. RPZ

17

PREC. RPZ

FUTURE 9,000' X 100' PARALLEL RUNWAY

4,300'

EXISTING 6,000' X 100' RUNWAY
FUTURE 8,000' X 100' RUNWAY

PASEO DEL VOLCAN CORRIDOR STUDY (ALIGNMENT A-2)

PETROGLYPH NATIONAL MONUMENT

NON-PREC. RPZ

EXISTING 7,400' X 100' RUNWAY
FUTURE 11,000' X 100' RUNWAY

CITY OF ALBUQUERQUE AVIATION DEPARTMENT

STATE OF NEW MEXICO

2,000' RUNWAY EXTENSION

CITY OF ALBUQUERQUE OPEN SPACE

3,600' RUNWAY EXTENSION

NON-PREC. RPZ

STATE OF NEW MEXICO LAND OFFICE

CITY OF ALBUQUERQUE AVIATION

35 VIS. RPZ

CITY OF ALBUQUERQUE OPEN SPACE

FAR WEST MESA

WESTLAND NORTH

N

2000 0 2000

GRAPHIC SCALE IN FEET
SCALE: 1" = 2,000'

LEGEND

- DOUBLE EAGLE II AIRFIELD
- DOUBLE EAGLE II DEVELOPMENT (EXISTING/PROPOSED)
- DOUBLE EAGLE II DEVELOPMENT (FUTURE)
- CITY OF ALBUQUERQUE AVIATION DEPARTMENT
- CITY OF ALBUQUERQUE OPEN SPACE
- STATE OF NEW MEXICO LAND OFFICE
- CITY OF ALBUQUERQUE
- AIRFIELD PAVEMENT
- LOCATION STUDY CORRIDOR (PASEO DEL VOLCAN EIS, MARCH 2000)

J:\DOUBLE EAGLE II\DRAWINGS\FIG 8.6.DWG 03/08/02 14:05

Double Eagle II Airport Master Plan

UNM

FUTURE RUNWAY EXTENSIONS

FIGURE: 8.6

QUAIL RANCH

NORTH MESA

CITY OF ALBUQUERQUE OPEN SPACE

CITY OF ALBUQUERQUE AVIATION DEPARTMENT

CITY OF ALBUQUERQUE OPEN SPACE

PASEO DEL VOLCAN CORRIDOR STUDY (ALIGNMENT A-1)

PREC. RPZ

NON-PREC. RPZ

FUTURE 7,500' X 100' RUNWAY

PREC. RPZ

NON-PREC. RPZ

CITY OF ALBUQUERQUE

PREC. RPZ

35 VIS. RPZ

17 VIS. RPZ

FUTURE 9,000' X 100' PARALLEL RUNWAY

4,300'

EXISTING 6,000' X 100' RUNWAY
FUTURE 8,000' X 100' RUNWAY

PASEO DEL VOLCAN CORRIDOR STUDY (ALIGNMENT A-2)

PETROGLYPH NATIONAL MONUMENT

NON-PREC. RPZ

EXISTING 7,400' X 100' RUNWAY
FUTURE 11,000' X 100' RUNWAY

CITY OF ALBUQUERQUE AVIATION DEPARTMENT

STATE OF NEW MEXICO

2,000' RUNWAY EXTENSION

CITY OF ALBUQUERQUE OPEN SPACE

3,600' RUNWAY EXTENSION

NON-PREC. RPZ

STATE OF NEW MEXICO LAND OFFICE

CITY OF ALBUQUERQUE AVIATION

35 VIS. RPZ

CITY OF ALBUQUERQUE OPEN SPACE

FAR WEST MESA

WESTLAND NORTH

N

2000 0 2000

GRAPHIC SCALE IN FEET
SCALE: 1" = 2,000'

LEGEND

- DOUBLE EAGLE II AIRFIELD
- DOUBLE EAGLE II DEVELOPMENT (EXISTING/PROPOSED)
- DOUBLE EAGLE II DEVELOPMENT (FUTURE)
- CITY OF ALBUQUERQUE AVIATION DEPARTMENT
- CITY OF ALBUQUERQUE OPEN SPACE
- STATE OF NEW MEXICO LAND OFFICE
- CITY OF ALBUQUERQUE
- AIRFIELD PAVEMENT
- LOCATION STUDY CORRIDOR (PASEO DEL VOLCAN EIS, MARCH 2000)

J:\DOUBLE EAGLE II\DRAWINGS\FIG 8.7.DWG 03/08/02 14:17

Double Eagle II
Airport Master Plan

UFAS

FUTURE CROSSWIND RUNWAY ALTERNATIVE 1

FIGURE:
8.7

8.4.3.1 Future Crosswind Alternative 1

Future Crosswind Alternative 1 proposes construction of a 10/28 crosswind runway located north of the existing airfield as presented in Figure 8.7. This alternative has no runway intersections and would require acquisition of approximately 253 acres from the City of Albuquerque Open Space Division. Future Crosswind Alternative 1 allows for unconstrained airfield development. Alternative 1 has potential for increased aircraft over flights of the Petroglyph National Monument. Based on feedback from airport users, Future Crosswind Alternative 1 offers the most efficient airfield layout in terms of airfield operations.

8.4.3.2 Future Crosswind Alternative 2

Future Crosswind Alternative 2 proposes construction of a 10/28 crosswind runway located at an intersection to the proposed Runway 4L/22R and associated infield area. The runway intersection increases the probability of runway incursions. As presented in Figure 8.8, this alternative would require acquisition of approximately 220 acres from the City of Albuquerque. Future Crosswind Alternative 2 impedes potential development in the infield area. Alternative 2 has potential for increased aircraft over flights of the Petroglyph National Monument.

8.4.3.3 Future Crosswind Alternative 3

Future Crosswind Alternative 3 proposes construction of a 10/28 crosswind runway located south of the proposed Runway 4L/22R and intersecting the existing Runway 4/22. The runway intersection increases the probability of runway incursions. This alternative would require acquisition of approximately 83 acres from the City of Albuquerque. Future Crosswind Alternative 3, as presented in Figure 8.9, allows for unconstrained airfield development. Alternative 3 has potential for increased aircraft over flights of the Petroglyph National Monument.

8.4.3.4 Future Crosswind Alternative 4

Future Crosswind Alternative 4 proposes construction of a 10/28 crosswind runway located southeast of the existing Runway 4/22. This alternative has no runway intersections and would require acquisition of approximately 361 acres from the Far West Mesa and Westland North communities. Future Crosswind Alternative 4, as presented in Figure 8.10, allows for unconstrained airfield development. Alternative 4 offers the least potential for increased aircraft over flights of the Petroglyph National Monument.

QUAIL RANCH

NORTH MESA

CITY OF ALBUQUERQUE OPEN SPACE

CITY OF ALBUQUERQUE AVIATION DEPARTMENT

CITY OF ALBUQUERQUE OPEN SPACE

CITY OF ALBUQUERQUE OPEN SPACE

PASEO DEL VOLCAN CORRIDOR STUDY (ALIGNMENT A-1)

PASEO DEL VOLCAN CORRIDOR STUDY (ALIGNMENT A-2)

PREC. RPZ

NON-PREC. RPZ

VIS. RPZ

FUTURE 7,500' X 100' PARALLEL RUNWAY

7,500' X 100' RUNWAY

4,300'

FUTURE 8,000' X 100' PARALLEL RUNWAY

EXISTING 7,400' X 100' RUNWAY
FUTURE 11,000' X 100' RUNWAY

EXISTING 6,000' X 100' RUNWAY
FUTURE 8,000' X 100' RUNWAY

CITY OF ALBUQUERQUE AVIATION DEPARTMENT

CITY OF ALBUQUERQUE OPEN SPACE

3,600' RUNWAY EXTENSION

STATE OF NEW MEXICO

2,000' RUNWAY EXTENSION

STATE OF NEW MEXICO LAND OFFICE

CITY OF ALBUQUERQUE AVIATION

CITY OF ALBUQUERQUE OPEN SPACE

PETROGLYPH NATIONAL MONUMENT

FAR WEST MESA

WESTLAND NORTH

N

2000 0 2000

GRAPHIC SCALE IN FEET
SCALE: 1" = 2,000'

LEGEND

- DOUBLE EAGLE II AIRFIELD
- DOUBLE EAGLE II DEVELOPMENT (EXISTING/PROPOSED)
- DOUBLE EAGLE II DEVELOPMENT (FUTURE)
- CITY OF ALBUQUERQUE AVIATION DDEPARTMENT
- CITY OF ALBUQUERQUE OPEN SPACE
- STATE OF NEW MEXICO LAND OFFICE
- CITY OF ALBUQUERQUE
- AIRFIELD PAVEMENT
- LOCATION STUDY CORRIDOR (PASEO DEL VOLCAN EIS, MARCH 2000)

J:\DOUBLE EAGLE II\DRAWINGS\FIG 8.8.DWG 03/08/02 14:36

Double Eagle II Airport Master Plan

UFGS

FUTURE CROSSWIND RUNWAY ALTERNATIVE 2

FIGURE: 8.8

QUAIL RANCH

NORTH MESA

CITY OF ALBUQUERQUE
OPEN SPACE

CITY OF ALBUQUERQUE
AVIATION DEPARTMENT

CITY OF ALBUQUERQUE
OPEN SPACE

CITY OF ALBUQUERQUE
OPEN SPACE

PASEO DEL VOLCAN CORRIDOR STUDY (ALIGNMENT A-1)

CITY OF ALBUQUERQUE

PREC. RPZ

PREC. RPZ

VIS. RPZ

17

PASEO DEL VOLCAN CORRIDOR STUDY (ALIGNMENT A-2)

FUTURE 9,000' X 100' PARALLEL RUNWAY

4,300'

EXISTING 6,000' X 100' RUNWAY
FUTURE 8,000' X 100' RUNWAY

PETROGLYPH
NATIONAL MONUMENT

PREC. RPZ

PREC. RPZ

9

4L

NON-PREC. RPZ

FUTURE 7,500' X 100' RUNWAY

EXISTING 7,400' X 100' RUNWAY
FUTURE 11,000' X 100' RUNWAY

CITY OF ALBUQUERQUE
AVIATION DEPARTMENT

CITY OF ALBUQUERQUE
OPEN SPACE

STATE OF
NEW MEXICO

2,000' RUNWAY
EXTENSION

PASEO DEL VOLCAN

PASEO DEL VOLCAN CORRIDOR STUDY (ALIGNMENT A-2)

28

NON-PREC. RPZ

NON-PREC. RPZ

4R

3,600' RUNWAY EXTENSION

STATE OF NEW MEXICO
LAND OFFICE

CITY OF
ALBUQUERQUE
AVIATION

35
VIS. RPZ

CITY OF
ALBUQUERQUE
OPEN SPACE

FAR WEST MESA

WESTLAND NORTH

N

2000 0 2000

GRAPHIC SCALE IN FEET
SCALE: 1" = 2,000'

LEGEND

- DOUBLE EAGLE II AIRFIELD
- DOUBLE EAGLE II DEVELOPMENT (EXISTING/PROPOSED)
- DOUBLE EAGLE II DEVELOPMENT (FUTURE)
- CITY OF ALBUQUERQUE AVIATION DEPARTMENT
- CITY OF ALBUQUERQUE OPEN SPACE
- STATE OF NEW MEXICO LAND OFFICE
- CITY OF ALBUQUERQUE
- AIRFIELD PAVEMENT
- LOCATION STUDY CORRIDOR (PASEO DEL VOLCAN EIS, MARCH 2000)

J:\DOUBLE EAGLE II\DRAWINGS\FIG 8.9.DWG 03/08/02 14:41

Double Eagle II
Airport Master Plan

UNM

FUTURE CROSSWIND RUNWAY ALTERNATIVE 3

FIGURE:
8.9

Double Eagle II Airport Master Plan

UNM

CITY OF ALBUQUERQUE OPEN SPACE

CITY OF ALBUQUERQUE AVIATION DEPARTMENT

CITY OF ALBUQUERQUE OPEN SPACE

CITY OF ALBUQUERQUE OPEN SPACE

PASEO DEL VOLCAN CORRIDOR STUDY (ALIGNMENT A-1)

CITY OF ALBUQUERQUE

PREC. RPZ

FUTURE 9,000' X 100' PARALLEL RUNWAY

4,300'

VIS. RPZ 17

PREC. RPZ

EXISTING 6,000' X 100' RUNWAY
FUTURE 8,000' X 100' RUNWAY

PASEO DEL VOLCAN CORRIDOR STUDY (ALIGNMENT A-2)

PETROGLYPH NATIONAL MONUMENT

N

2000 0 2000

GRAPHIC SCALE IN FEET
SCALE: 1" = 2,000'

NON-PREC. 4L RPZ

EXISTING 7,400' X 100' RUNWAY
FUTURE 11,000' X 100' RUNWAY

CITY OF ALBUQUERQUE AVIATION DEPARTMENT

STATE OF NEW MEXICO

2,000' RUNWAY EXTENSION

CITY OF ALBUQUERQUE OPEN SPACE

3,600' RUNWAY EXTENSION

PASEO DEL VOLCAN

PREC. RPZ

NON-PREC. 4R RPZ

NON-PREC. 01 RPZ

STATE OF NEW MEXICO LAND OFFICE

CITY OF ALBUQUERQUE AVIATION

VIS. RPZ 35

CITY OF ALBUQUERQUE OPEN SPACE

FUTURE 7,500' X 100' RUNWAY

WESTLAND NORTH

FAR WEST MESA

28 NON-PREC. RPZ

LEGEND

- DOUBLE EAGLE II AIRFIELD
- DOUBLE EAGLE II DEVELOPMENT (EXISTING/PROPOSED)
- DOUBLE EAGLE II DEVELOPMENT (FUTURE)
- CITY OF ALBUQUERQUE AVIATION DEPARTMENT
- CITY OF ALBUQUERQUE OPEN SPACE
- STATE OF NEW MEXICO LAND OFFICE
- CITY OF ALBUQUERQUE
- AIRFIELD PAVEMENT
- LOCATION STUDY CORRIDOR (PASEO DEL VOLCAN EIS, MARCH 2000)

FUTURE CROSSWIND RUNWAY ALTERNATIVE 4

FIGURE: 8.10

J:\DOUBLE EAGLE II\DRAWINGS\FIG 8.10.DWG 03/08/02 14:45

8.5 ALTERNATIVES COMPARISON/RECOMMENDATION

The proposed runway extension and future parallel runway alternatives have been concurred with by airport users and management and are recommended by this master plan. Under consideration are the future crosswind alternatives. Based on feedback received from airport users and management, it is recommended that Future Crosswind Alternative 1 and Future Crosswind Alternative 4 be analyzed in more detail with respect to environmental considerations as well as operational feasibility. It is apparent that these alternatives offer the most flexibility for future development while maintaining the operational efficiency of the airfield.

8.6 AIRPORT TRAFFIC CONTROL TOWER SITING ALTERNATIVES

The ongoing Eclipse Aviation and infrastructure development program includes the construction of an airport traffic control tower (ATCT). The site location for the ATCT has not been selected at this time. There are numerous items to consider when selecting an ATCT, which are outlined in the FAA Publication Order 6480.4, *Airport Traffic Control Tower Siting Criteria*. In addition, a key element to the permanent ATCT location is the ultimate planned configuration of the airfield (runway/taxiway system). At this time, a preferred alternative airfield configuration has not been selected. Others are still analyzing potential ATCT sites and a preferred ATCT site location should be identified for incorporation into this master plan study by the summer of 2002.

8.7 LANDSIDE FACILITIES ALTERNATIVES

Within the 20-year master plan time period, two areas on the airport are being identified for future aviation development. These two areas are presented on the Double Eagle II Airport development (existing/proposed) in the airfield alternative, Figures 8.6 through 8.10. The first is the ongoing 150-acre Eclipse Aviation site located in the southeast section of the airport. This is a multi-year phased expansion program. Details of the Eclipse Aviation development plans are not available at this time.

The second general aviation (GA) facility growth area identified in this plan is the area south of the existing GA facilities adjacent to the primary Runway 4/22. Conceptual detailed layouts will be presented under Section 10.0, Development Plans.

This area, identified in Figures 8.6 through 8.10, represents between 200 and 300 acres. It is estimated at this time that approximately 100 to 150 acres of GA facility development will be needed to support to 20-year Double Eagle II Airport forecasted air traffic activity levels.

8.8 ON-AIRPORT ROADWAYS

8.8.1 Existing Access Road Modification Options

An Environmental Assessment (EA) for the existing interim access road was signed and accepted by the FAA in 1994. This access road extends from the airport's north property boundary due south and parallels the eastern property line. At present, the access road does not provide a direct connection to Paseo Del Volcan. Users of the access road have indicated that a direct connection to Paseo Del Volcan would be beneficial and more operationally efficient. Therefore, based on user comments, three modifications to the existing on-airport access road/Paseo Del Volcan connection were developed and evaluated in this alternatives analysis. These alternatives are presented as discussion points only. Implementation of any of these options to the existing on-airport access road would require further analysis and approval by the FAA.

8.8.1.1 Access Alternative 1 – No Action

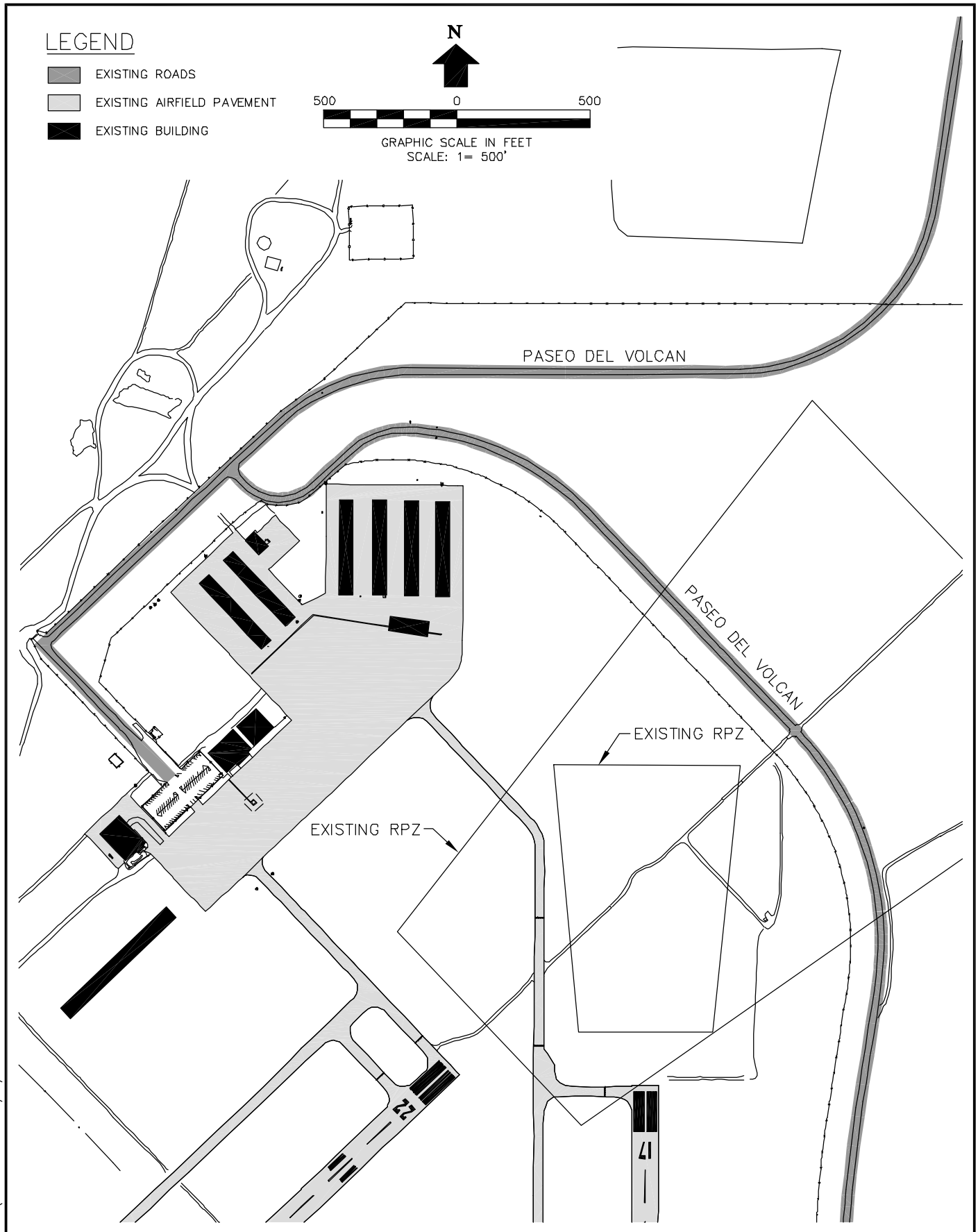
With the No Action Alternative, a direct connection from the on-airport access road to Paseo Del Volcan would not be provided. The Access Alternative 1 - No Action is presented in Figure 8.11.

8.8.1.2 Access Alternative 2

The Alternative 2 access modification option extends Paseo Del Volcan directly north to connect with the on-airport access road. As presented in Figure 8.12, this option removes portions of existing roadway to minimize pavement and provide more direct access to the airport and to points north and south of the airport. Although the existing roadway meets minimum clearance standards established in Federal Aviation Regulation, Part 77, *Objects Affecting Navigable Airspace*, removing this portion of roadway provides enhanced safety by increasing the vertical clearance beneath the existing RPZ to Runway 22. This alternative also opens up an additional area northeast of the existing FBO for future aviation-related development.

8.8.1.3 Access Alternative 3

The Alternative 3 access modification option extends Paseo Del Volcan at a right angle to the north to connect with the on-airport access road. As shown in Figure 8.13, this option removes portions of existing roadway to minimize pavement and provide more direct access to the airport and to points north and south of the airport.



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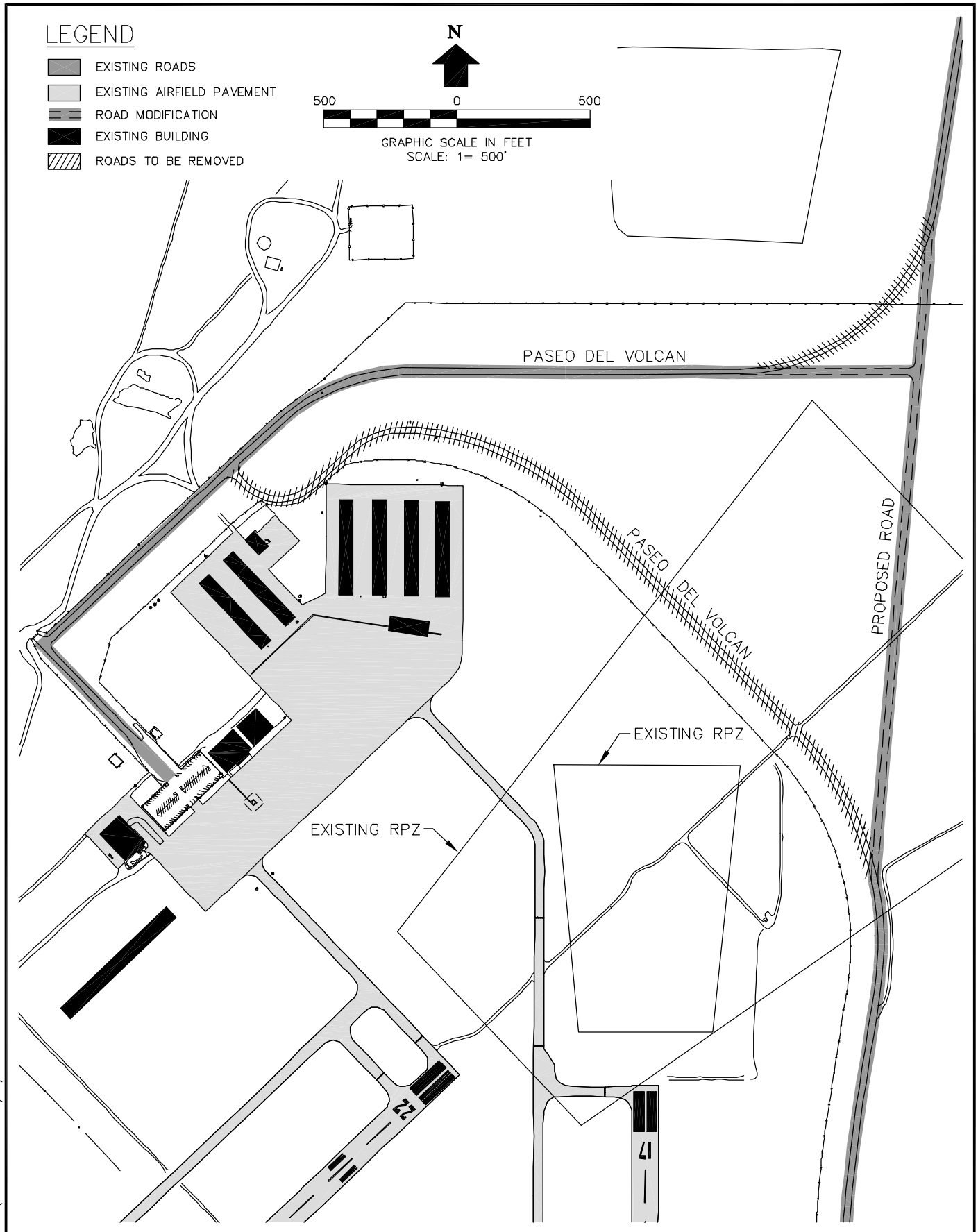
ACCESS ROAD MODIFICATION ALTERNATIVE 1 - NO ACTION

FIGURE: 8.11

J:\DOUBLE EAGLE II\DRAWINGS\FIG 8.11.DWG 02/22/02 10:47



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ACCESS ROAD MODIFICATION ALTERNATIVE 2

FIGURE: 8.12

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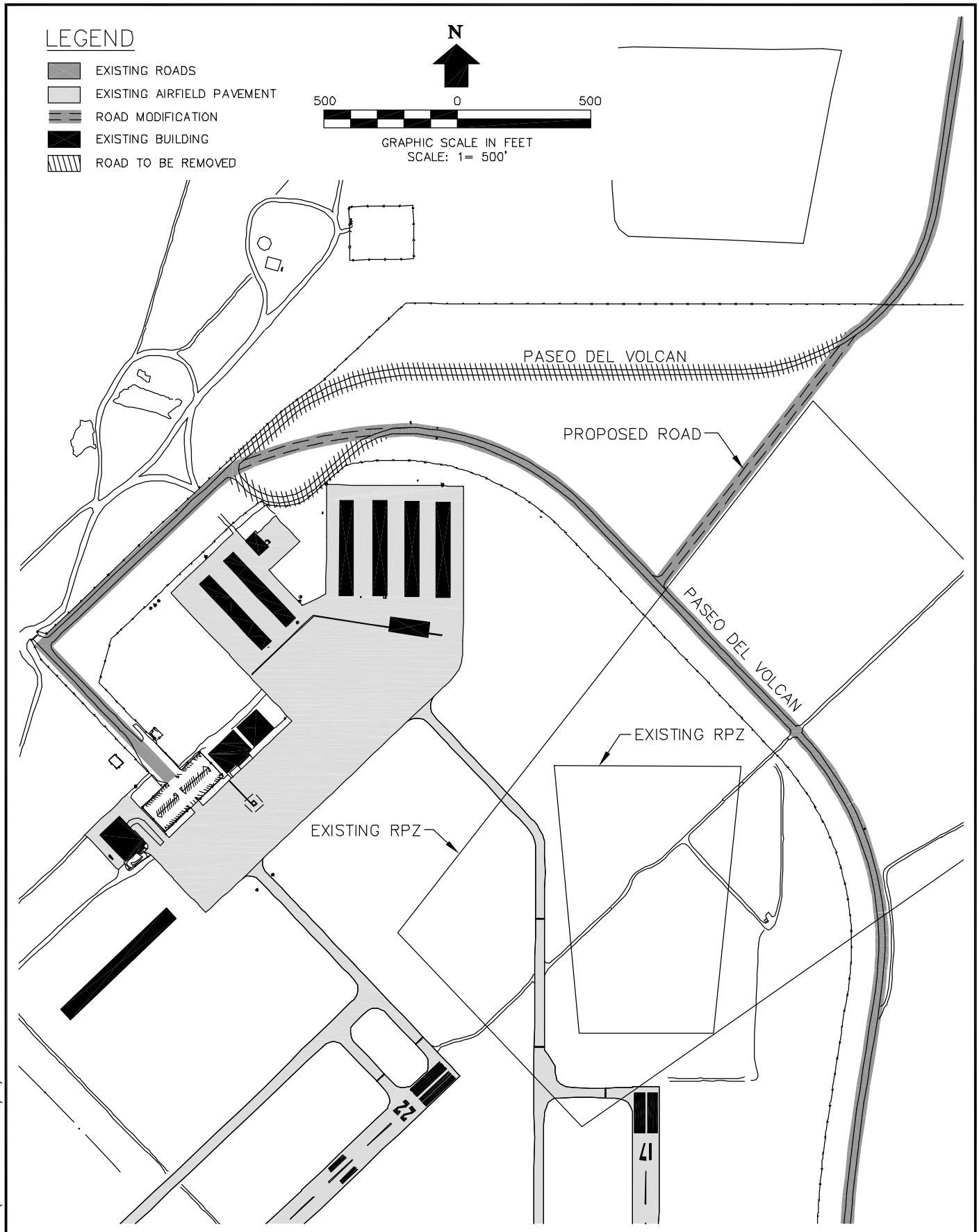

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ACCESS ROAD MODIFICATION ALTERNATIVE 3

FIGURE: 8.13

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8.8.2 On-Airport Conceptual Road Layout

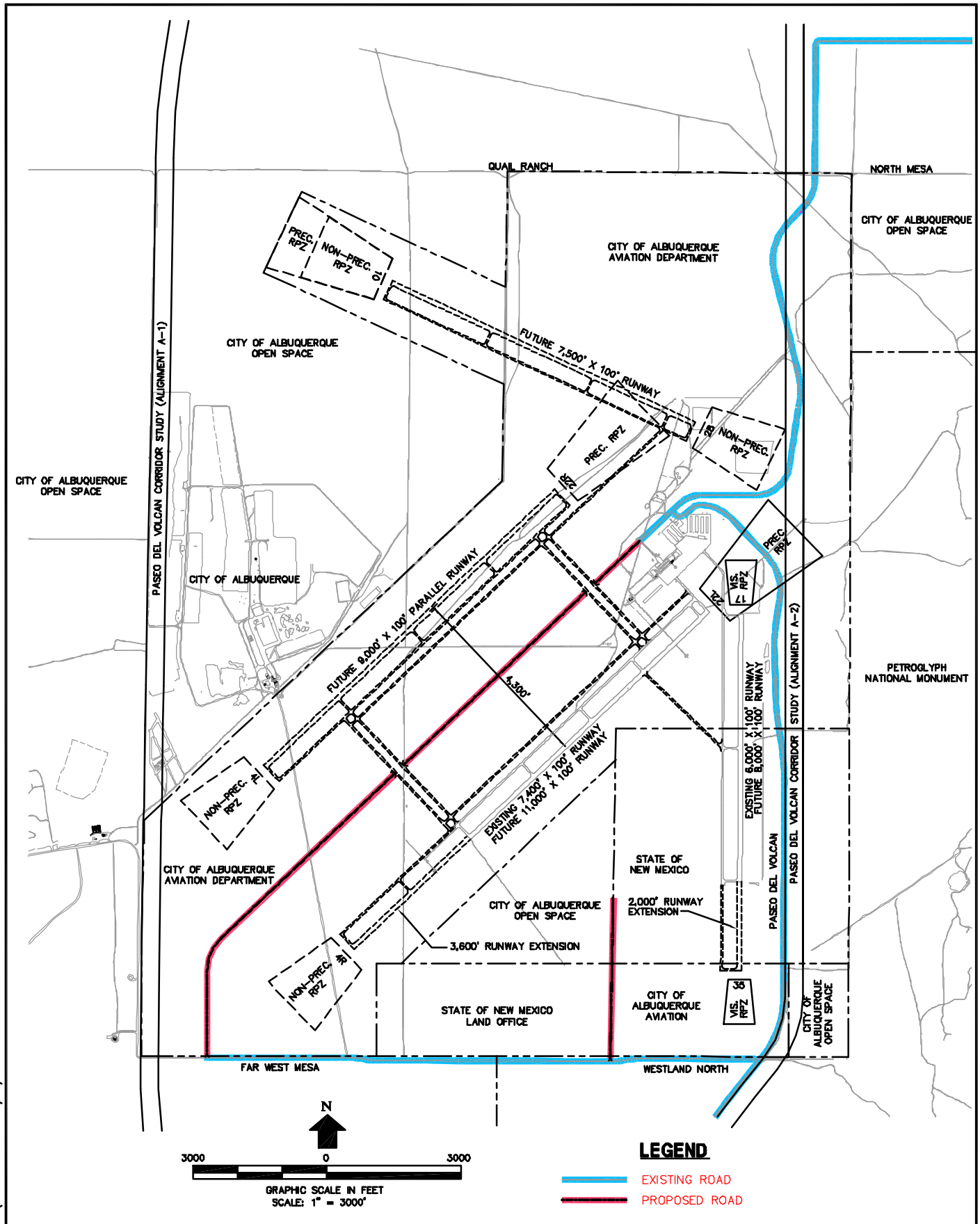
To provide internal airfield access, an on-airport conceptual road layout has been developed to accommodate the recommended future airfield alternative layouts. These road layouts incorporate existing roadways to the fullest extent while providing enhanced on-airport circulation. All recommended roadway layouts require further environmental analysis to determine feasibility and associated impacts.

8.8.2.1 Future On-Airport Conceptual Road (Crosswind Alternative 1)

The future on-airport conceptual road associated with Crosswind Alternative 1 creates an internal loop system that continues to use Paseo Del Volcan and extends a spine road through the center of the airfield. The existing east-west connector road is utilized as part of this internal loop system. As presented in Figure 8.14, this access road would provide access for future aviation-related development in the existing as well as the future midfield areas (Eclipse Aviation).

8.8.2.2 Future On-Airport Conceptual Road (Crosswind Alternative 4)

The future on-airport conceptual road associated with Crosswind Alternative 4 creates an internal loop system that continues to use Paseo Del Volcan and extends a spine road through the center of the airfield. The existing east-west connector road is modified to accommodate the new crosswind runway. As presented in Figure 8.15, this access road would provide access for future aviation-related development in the existing as well as the future midfield areas (Eclipse Aviation).



J:\DOUBLE EAGLE II\DRAWINGS\FIG 8.14.DWG 03/08/02 15:53

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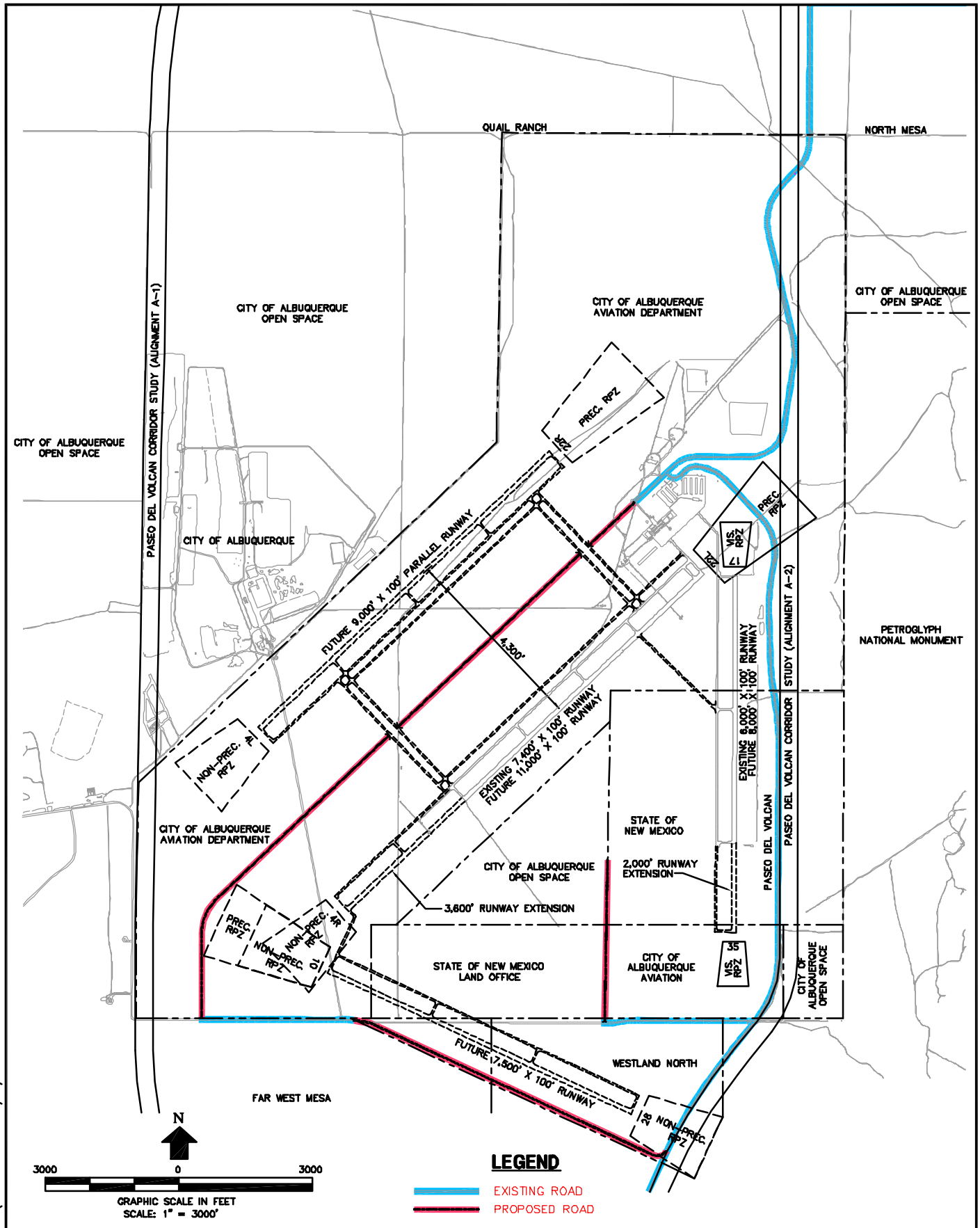
FUTURE ON-AIRPORT CONCEPTUAL ROAD (CROSSWIND ALTERNATIVE 1)

FIGURE: 8.14



J:\DOUBLE EAGLE II\DRAWINGS\FIG 8.15.DWG 03/08/02 16:03

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FUTURE ON-AIRPORT CONCEPTUAL ROAD (CROSSWIND ALTERNATIVE 4)

FIGURE: 8.15

LIST OF FIGURES